REMARKS

Claims 1-4, 6-11, 14, 16-17, 21-24, 26, 28 and 29 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,775,256 (Hill). Claims 5, 12 and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Hill in view of U.S. Patent Publication No. 2003/0123477 (Gollamudi). Claims 13, 15, 25 and 27 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Hill in view of U.S. Patent Publication No. 2002/00304170 (Tiedemann, Jr., et al).

In accordance with the iterative technique set forth in the claimed subject matter, the number of assigned channelization codes and the power fractions are adjusted over a plurality of iterations to arrive at a solution that optimizes the channel capacity. In particular, the claimed subject matter includes, among other things, evaluating a number representing how many channelization codes are to be assigned to each of the packets and evaluating the portion of the allocated transmission power to be assigned to each data packet using an iterative procedure that adjusts the values for the portions of the allocated transmission power and the number of channelization codes for at least one iteration responsive to the channel quality metrics and the values for the portions of the allocated transmission power and the number of channelization codes determined during at least one prior iteration to optimize a capacity of a channel for communicating the data packets during the current transmission.

The Office Action asserts that Hill teaches these features. To the contrary, Hill simply selects different groups of candidate packets and assigns power levels to the packets. The packets in the candidate set are modified and the transmit power is recalculated until a transmit power threshold is reached, all packets have been scheduled, or a real time constraint has been met. Although Hill iterates candidate packets and power levels, this does not equate to iterating

channelization code numbers and power levels for a given set of packets. Applicants do not vary the set of candidate packets. Hill is completely silent about assigning channelization codes. This is the case for several reasons.

First, the scheduler of Hill operates at the radio network controller level. Channelization codes are not assigned at this level, but rather, channelization codes are assigned at the base station level. Hence, for this reason alone, Hill cannot iteratively assign numbers of channelization codes. The candidate packets and power iterations of Hill have nothing to do with channelization codes. Any iterations are completed prior to the assigning of channelization codes.

Second, CDMA techniques in use when Hill was filed had no capacity to assign more than one channelization code per packet. Hill does not point to any deficiency of this conventional approach. In fact, Hill does not mention channelization codes even once, in this regard, or in any other regard. Much less, then, does Hill say anything to disturb the above said conventional practice of invariably using just one channelization code per packet.

On the other hand, the iterative procedure described in the instant claim is directed to determining a number of channelization codes per packet that is variable, and that, in particular, may be more than one. Clearly, then, such an approach would be considered by one of ordinary skill in the art at the time of filing only if it were already contemplated that the number of channelization codes per packet might be varied, and might be greater than one.

As Hill clearly contemplates only the invariable number of one channelization code per packet, and would be so understood by the artisan of average skill at the time the instant application was filed, it would be error to read into Hill any suggestion—much less any teaching—to iteratively determine the number of channelization codes per packet.

For these reasons, claims 1, 10, 16, 28, and all claims depending therefrom are allowable. Applicants respectfully request the rejections of these claims be withdrawn.

With respect to the dependent claims, the specific features set forth for the iterative technique and the use of optimization parameters, constraints, and cost functions are neither taught nor suggested by Tiedemann. Again, the cited passages only relate to the power levels over time, not to the assignments for a current transmission. The Office Action fails to demonstrate by specific reference to the prior art how the use of optimization parameters, constraints, and/or a cost function may be used in an iterative technique to optimize channel capacity for a current transmission. The general rejections provided do not address with specificity each and every limitation of the claimed subject matter.

In view of the foregoing, Applicants respectfully submit that all pending claims are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4070 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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